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Abstract

The objective of this study is to examine the extent to which benefits received from the Unemployment Insurance Program displace assistance that the unemployed receive from their extended family. Using data from a supplement to the Panel Study of Income Dynamics, it is found that the unemployed receive private support and that these private networks are fairly pervasive; twenty-nine percent of those receiving Unemployment Insurance benefits also receive cash transfers from their family or friends. Moreover, it is found that unemployment benefits displace familial support by as much as 24-40 cents per dollar.

Key words: crowd-out, private transfers, unemployment insurance.

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1. INTRODUCTION

Parents provide their children with money, housing, education, and food as well as nurturing, compassion, and friendship. Although the existence of such support is clear, the underlying motivation for it is less understood. Some (Barro, 1974; Becker, 1974) argue that parents act altruistically toward their children; they care about their children's well-being. Others (Bernheim, Shleifer and Summers, 1985; Cox, 1987; Cox and Rank, 1992; Kotlikoff and Spivak, 1981) argue that these transfers are actually exchanges, where parents receive, or expect to receive, reciprocal transfers. Still others (Andreoni, 1989; Yaari, 1966) argue that satisfaction is derived from giving *per se,* The result has been a debate over which motivation is dominant.

As discussed below, the distinction between the different hypothesized motivations is important for determining the effectiveness of public redistribution programs. But it is expected that all of the motivations apply to some people, and determining which motivation dominates would be very difficult. Furthermore, the questions stimulating the debate over the motivation for transfers may be addressed more directly and succinctly without attempting to determine empirically whether or to what extent individuals behave altruistically. This paper addresses one such question: Is support by family members and friends displaced by government transfers?

With regard to this question, Okun's (1975) analogy of the "leaky bucket" is fitting. He identifies several inefficiencies that arise from a tax-transfer system. These inefficiencies include administrative costs of distributing transfers and collecting taxes, distorted work effort, and altered savings and investment behavior. One potential leak that Okun does not address is the displacement of support received from family members and friends. Individuals who would otherwise receive support from family and friends may not receive such support, or receive less of it, in the presence of public alternatives. The objective of this study is to examine displacement of family support by the Unemployment Insurance program. I estimate the size of this "leak" and discuss its implications for policy.

I begin by briefly discussing several models of private transfers that lead to different predictions of the relationship between public and private transfers. Some models (Barro, 1974; Becker, 1974; Roberts, 1984) predict that public transfers lead to substantial crowding out of private donations, even dollar-for-dollar displacement. Others (Bernheim, Shleifer, and Summers, 1985; Cox, 1987; Andreoni, 1989) predict that this may not be the case because of non-altruistic motives. I then provide a critical discussion of the empirical studies that have analyzed the relationship between public and private transfers. Finally, the empirical analyses that examine whether Unemployment Insurance displaces familial assistance are reported. After establishing that the unemployed receive non-trivial private transfers, I then estimate the responsiveness of private transfer income to variations in unemployment compensation income. A final section interprets the findings in light of policy.

2. THEORIES OF PRIVATE TRANSFERS AND CROWDING OUT

The four models of private transfers that have been most widely studied can be expressed under one unified framework. Consider transfers (F) from a donor (e.g. a parent) to a recipient (e.g. a child). Let X_p and X_c be the amount of private consumption of the parent and child, respectively, where the child's income from transfers (F) and other sources (Y_c) is spent on own consumption (i.e. $X_c = Y_c + F$). The amount of services the child provides to the parent, S, is expressed as a function of F,[1] and $U_c()$ is the child's utility. The function *w(.)* represents a "warm-glow" effect that is described below. Z is the set of all factors besides F that influence *w(.)*. The parent's utility is described by (1):

$$U_p = U_p(X_p, S(F), w(F,Z), X_c, U_c(Y_c + F, -S)) \qquad (1)$$

The four models of private transfers can be expressed as special cases of this general specification.[2]

One of the most intuitively compelling models is that of altruism as formalized by Barro (1974), Becker (1974) and Bergstrom (1989). In this model, parents care for the well-being of their children as well as their own consumption ($U_p = U_p(X_p, U_c(X_c))$). This simple version of the altruism model has very strong predictions with regard to the crowding out of private transfers. Becker (1981), Roberts (1984), and Bernheim and Bagwell (1988) show that at interior solutions, a one dollar increase in government benefits received by a family member who also receives private transfers, along with a

one dollar increase in taxes levied on the family member making private transfers would lead to complete, dollar-for-dollar, crowding out.[3,4] But in cases where corner solutions are prevalent, the result may not hold.

A model that is related to altruism is the paternalistic model formalized by Pollak (1988). In this model, parents care about the consumption patterns of their child (i.e. $U_p = U_p(X_p, X_c)$, and they make tied transfers to their children to encourage or discourage consumption of certain goods. The prediction for crowding out in this model is not as straightforward. Consider an example where parents care about the education of their child. If patents are taxed to fund increased schooling of the child, then crowding out may be dollar-for-dollar. If, instead, the taxes collected from the parent are given to the child as cash transfers, then crowding out may not be complete.

Marcell Mauss was one of the first to apply exchange theory to the study of private transfers. Mauss (1925) describes the kula ring of the Trobriand Islanders. In these transfer networks, gifts are given with the expectation that reciprocal gifts will eventually be received. Economists have borrowed this idea and incorporated it into utility theory (Cox 1987, 1991; Bernheim, Shleifer and Summers, 1985).[5] Using (1), this model posits that parents care about their own consumption via X_p and S and do not care about the well-being of their children (i.e. $U_p = U_p(X_p, S)$). Under exchange, Cox (1987) demonstrates that as the amount of resources available to the child increases, the amount of transfers received from parents may be altered by any magnitude. In fact, the model implies that transfers received from parents may actually increase in response to an

increase in the resources of the child because the child now demands greater compensation to provide the same amount of service.

The fourth model is the "warm-glow" model (Andreoni, 1989), where parents derive satisfaction directly from making transfers and not from what the transfer does for the child (i.e. $U_p = U_p(X_p, w(F,Z))$). This model has a very strong prediction, implying no crowding out at all.[6] The amount of transfers received from other sources, such as public sector transfer programs, does not alter the amount given by the parent. In fact, transfers are given independently of all characteristics of the child unless the warm-glow is a function of the child's characteristics.[7]

Each of these models has been treated in isolation. It is reasonable to believe that people make transfers for a combination of the reasons given above. Andreoni (1989) considers a mixture of the altruism model and the warm-glow model where the parental utility function is $U_p = U_p(X_p, w(F,Z), U_c(X_c))$. This model, as Andreoni (1989) shows, predicts less than complete crowding out because the parent derives utility from the act of giving *per se*.

In sum, several reasonable models of private transfer behavior have been posed. The range of predictions regarding crowding out is wide. The pure altruism model implies that crowding out is as great as dollar-for-dollar. The warm-glow model predicts that the amount of transfers given is independent of the child's well-being, and therefore there is no crowding out. The exchange model and the hybrid warm-glow-altruism model developed by Andreoni (1989) predict that any degree of crowding out is possible. Unless

one is willing to dismiss some models *a priori,* the question concerning the extent to which public transfers crowd out private transfers must be addressed empirically. I now turn to a critical discussion of the empirical studies that have tried to do so.

3. EMPIRICAL STUDIES OF FAMILY TRANSFERS & PUBLIC ASSISTANCE

In the few empirical studies that have analyzed the crowding out of private transfers in the U.S., most have examined charitable contributions reported to the Internal Revenue Service (IRS). The conclusion reached in most of these studies is that charitable contributions are indeed displaced by government expenditures, and the conclusion of Brennan and Pincus (1983) accurately depicts these findings: "The immediate analytic presumption, therefore, is that over a significant range, publicly provided redistribution is offset by corresponding reductions in private transfers ... it would be somewhat surprising if public transfers did not substitute for private transfers to some extent" (1983:p.34). These studies have not investigated familial transfers, which is the focus of this study.

The first empirical study to investigate familial transfers was Lampman and Smeeding (1983). They integrate available data from several different sources and find that interhousehold transfers were greater than governmental transfers thirty years ago. But, in the past 50 years this has reversed. They estimate that total personal income derived from private transfers fell from 6.5 percent to 5.0 percent between 1935 and 1980. For the same period, government transfers increased from 2.8 percent to 11.2 percent. Making similar conclusions as Brennan and Pincus (1983), Lampman and

Smeeding state, "We assume that the growth in government cash and in-kind transfers explains much of this decline in interfamily transfers" (1983:p.59).

Cox and Jakubson (1995), using the President's Commission on Pension Policy (PCPP) data set, examine the displacement effects on familial cash assistance. Recognizing the potential endogeneity of government income transfers (which is discussed in Section 6 below), they instrument for public income transfers. They find some support for displacement by some types of government assistance.

The analysis conducted in the current study is unique in that it investigates the crowding out effect of an individual government program, Unemployment Insurance, using a relatively unexplored nationally representative data set that contains high-quality data on public transfers and familial support. These data are arguably of much higher quality than the data used by Lampman and Smeeding (1983) or Cox and Jakubson (1995). The study also addresses the potential endogeneity of unemployment benefits, as described below.[8]

4. DATA

Households included in the Panel Study of Income Dynamics (PSID) are interviewed annually regarding a number of factors: income sources for the prior year, household composition, detailed employment information about heads of households and their spouses, earnings of all household members, hours spent working, commuting, and doing housework, food expenditures, housing, and geographic mobility. Also, an extensive set of background information about heads of households, and limited

information about spouses, has been collected and continues to be gathered for new heads and spouses.[9] Particularly pertinent to this study is the high-quality and detailed information on public transfer income. In addition, the households interviewed are asked to provide information regarding each of the head's parents and, if there is a spouse, each of the spouse's parents. This information includes the parents' net wealth, education, distance in miles from respondent's residence, and living arrangements.

The data that receive primary attention in this study come from a supplement to the 1988 PSID, which investigates private interhousehold transfers.[10] The question regarding private parental monetary transfers asks, "During 1987, did (you or your family living there) receive any loans, gifts, or support worth $100 or more from your parents?"[11,12] In addition, a similar question was asked about transfers of money received from other relatives, friends, etc.[13,14]

Combined with the information collected annually, the PSID data on private transfers have several advantages over data available from other surveys:

- Demographic and income characteristics of both the donor and the recipient are available for parental transfers.
- Data on both whether a transfer was made and the magnitude of the transfer are collected.
- The PSID has an extensive set of information on the household being interviewed and the individuals within the household.
- The PSID contains relatively high quality data on income from public transfer programs including unemployment benefits.

5. RELATIVE MAGNITUDE OF FAMILY TRANSFERS & UI BENEFITS

The primary objective is to estimate whether unemployment compensation displaces private familial assistance and, if so, the extent to which it does. However,

before examining this relationship I demonstrate that families do indeed receive private assistance, and that this assistance is substantial relative to public transfers.

The sample analyzed consists of those households in which the head or spouse was unemployed sometime during 1987 (N=1258). Additional sample selections were also made. The analysis is restricted to households in which neither a parent nor parent-in-law lives within the same household as the respondent, and to households in which the head did not change between 1987 and 1988. The question regarding transfers with non-parents conditions on the transfer being with someone outside the household, i.e. it asks about *inter*household transfers. The question regarding transfers with parents does not make this condition. Thus, in order to restrict attention to interhousehold transfers, this selection is made, reducing the sample to 1197. The latter selection is made to insure that private transfers that were made in 1987 and reported in 1988 are attributed to the correct household head. This selection reduces the sample to 1056.[15] In addition, households in which the head or spouse is self-employed are dropped because most states do not insure the self-employed. Finally, twenty of the remaining observations for which family transfers are greater than or equal to $5,000 are eliminated. The mean private transfer for those receiving UI is $847; therefore, these are very large transfers relative to most. This leads to a sample of 893 households.[16] The sensitivity of the results to each of the last four sample selections is examined. Except for the treatment of outliers, the results do not change in any substantive way.

Table 1 reports the relative magnitudes of private transfers and unemployment benefits for the sample described above (Column 1) and the sample of households that

actually received unemployment benefits (Column 2). Among the unemployed, 29.1 percent received familial assistance. The average amount of assistance was $847 for those receiving familial help. Private transfers account for 2.31 percent of total household income for the unemployed. Unemployment benefits account for 3.15 percent of total household income for this same sample.

Families receiving unemployment benefits were similar to families not receiving benefits in terms of the probability and amount of private transfers received. Private transfers were received by 27 percent of the families receiving unemployment assistance. The average amount of private transfers for these families was $735. Furthermore, the mean ratio of private transfers to unemployment benefits for those receiving unemployment benefits was 0.47, implying that private transfers are substantial relative to UI benefits.

It is interesting to note that even among families receiving unemployment benefits, these benefits accounted for only 8.1 percent of total household income. This low percentage is not surprising because many of the families receiving unemployment benefits during 1987 were not unemployed the entire year. In fact, among these families the vast majority of income comes from the labor market; earnings of the head and the spouse account for 56 percent and 19 percent of total household income, respectively.

6. ESTIMATING THE EXTENT OF CROWDING OUT

As shown in Table 1, recipients of UI are likely to receive private transfers, and the amount they receive is large relative to unemployment compensation. I now turn to

estimating the extent to which transfers received from the UI program crowd out private interhousehold support received from relatives and friends. Before doing so, key characteristics of the UI program are described.

The Unemployment Insurance Program

The federal-state system of Unemployment Insurance was established under the Social Security Act. UI benefits are determined in a somewhat similar manner across states. An unemployed worker becomes eligible for unemployment compensation if that person worked in a job covered by UI for a minimum number of weeks or earned a minimum amount in wages. Having met these requirements, they receive unemployment benefits for no more than about 26 weeks with the weekly benefit equal to about one-half their previous weekly wage. However, there is a maximum weekly benefit and a maximum total benefit that can be received over a benefit period. These maximums, as well as other state-specific parameters that determine the amount of UI income, vary substantially across states. In 1987 the maximum potential benefit for a benefit period ranged from $3,120 in Alabama to $10,620 in Massachusetts. There were 10 states with maximum benefits less than $4,000 and 11 states with maximum benefits greater than $6,000. The variation in these parameters across states is exploited in the estimation.[17]

Estimating Model and Estimation Procedures

It is assumed that donors of interhousehold transfers determine a (latent) amount of transfers, F_i^*, that they desire to give to household *i*. This amount is described by equation (2a) below. The determinant of central importance is the (actual) amount of unemployment compensation (government) income G_i that is received by household *i*. The model is as follows:

$$F_i^* = \beta_x X_i + \beta_g G_i + \mu_i \qquad (2a)$$

$$F_i = \begin{cases} F_i^* \text{ if } F_i^* \geq 100 \\ 0 \quad otherwise \end{cases} \qquad (2b)$$

where F_i is the actual amount of private interhousehold transfers received by household *i* in a given year, and X_i is a matrix of control variables to be discussed later. F_i^* is censored at $100 because the question regarding private interhousehold transfers asks about transfers received that were $100 or more, and many households do not receive positive transfers in a given year. In the data analyzed, 29 percent of the sample receive private transfers greater than $100.

One convenient aspect of the UI program for these analyses is that the weekly benefit amount is not dependent on the amount of private transfers received. Even so, for several reasons, it is likely that the amount of UI income received in a year is endogenous with respect to private interhousehold transfers. First, unemployed persons may be less likely to apply for UI if they are receiving support from family and friends, especially if there is a stigma associated with participating in government assistance programs

(Moffitt, 1983). Second, having familial support may allow the unemployed to locate a job more quickly, which would reduce the duration on UI and lower the amount of income received from UI over the year. Third, on the other hand, those who are receiving familial support may be able to afford to stay unemployed longer, waiting until they find a good job. In addition,' unobserved determinants of F^*, such as unobserved determinants of the intensity of the unemployment spell, are likely to be correlated with G. Finally, if private transfers and unemployment compensation income are measured with error, and those who under-report income from one source are more likely to under-report income from the other, then μ and the error term in an equation describing UI income (defined as ε below) are positively correlated. Indeed, there is concentration in reported money transfers at amounts ending in 100, 500, and 1000, suggesting the possibility of measurement error.[18] Unfortunately these scenarios lead to different predictions with regard to the direction of the bias of an OLS estimate of β_g. The first two imply that the OLS estimate would overstate crowding out, and the last three imply that it would understate crowding out. Therefore, the direction of the bias cannot be determined a priori.

To incorporate endogeneity, consider a model of UI income. Let G_i^* represent the (latent) amount of UI income received by household i in a given year, and let it be described by the following process:

$$G_i^* = \gamma_x X_i + \gamma_s S_i + \gamma_f F_i + \varepsilon_i \qquad (3a)$$

$$G_i = \begin{cases} G_i^* \text{ if } G_i^* \geq 100 \\ 0 \quad otherwise \end{cases} \qquad (3b)$$

where S_i is a matrix of state-specific policy parameters that influence G_i but are assumed to be uncorrelated with μ. The sample analyzed, which was discussed above, consists of families experiencing unemployment. But not all the unemployed receive unemployment compensation. Almost 60 percent of the sample of the unemployed did not receive unemployment compensation.

To analyze the amount of private transfers received, linear two-stage least squares is implemented. This is done for the following reasons. First, full information estimation would require an assumption about the distribution of G^* and the joint distribution of F^* and G^*. Unemployment benefits are determined by state specific UI policy parameters, and, therefore, people cannot receive more than the maximum benefit. Thus, G^* is most likely not normally distributed. Second, there is evidence that in non-linear models, linear instrumental variables does very well in samples of the size used in this study. Using a Monte Carlo study of the bivariate Probit model, Angrist (1991) finds that the linear instrumental variables estimator does not perform much worse than the correctly specified maximum likelihood estimator.[19] Moreover, as Angrist (1991) mentions, the linear IV estimator is desirable because the source of the identifying information is more evident.[20]

With this in mind, the following procedure is executed. First, equations (2a)-(2b) are estimated ignoring the potential endogeneity. In this analysis, the sensitivity of the

estimates of crowding out to the treatment of the censoring of F is examined. Assuming normality of F^*, a tobit model is specified for (2a)-(2b) and estimated by maximum likelihood procedures. The resulting tobit estimates are then compared with the OLS estimates. I interpret the fact that tobit and OLS estimates of the effect of unemployment compensation on the (actual) amount of private transfers are similar as providing some additional evidence that the use of linear techniques is not misleading. Based on this evidence and the findings by Angrist (1991), I proceed to address the endogeneity of unemployment compensation in the context of the linear problem using two-stage least squares.

Results

Recall that the coefficient estimate of primary interest is β_g. The controls in the analysis include variables for the economic situation of both the recipient and potential donor. (Descriptive statistics of all covariates are given in appendix table A1.) Total household income excluding family transfers and all government transfers is used for recipients. For potential donors, the economic standing of the parents of the head of the household is used as a proxy. Seventy-five percent of all transfer dollars received are received from parents. Thus, using parents to represent potential donors is reasonable, as well as practical, given the data. The head's father's education and the head's married parents' net wealth are the control variables used. The remaining control variables include the years of schooling of the head, the head's age, race, sex, health and marital statuses, the number

of parent-households,[21] the total number of siblings of the head and spouse, whether there was a child less than three years old in the household, whether the respondent purchased a home in the past year, and the distance to the head's married parent's home. The sensitivity of the estimate of crowding out to the inclusion of these controls is explored below.

The OLS and tobit estimates are reported in Table 2. In addition, the effects on the probability of receiving transfers are estimated assuming a probit specification with estimation by maximum likelihood procedures (Table 2.) The probability of receiving transfers decreases with the amount of unemployment compensation received, as predicted. Evaluating the effects at the (weighted) means of all other explanatory variables, a $1,000 increase in unemployment compensation decreases the probability of receiving money assistance by 2.0 percentage points. This is a non-trivial effect given that 29 percent of the sample receives monetary transfers. However, the coefficient estimate is not precisely estimated. Also note that the coefficients on unemployment compensation and on income from all other sources are different, which is also the case for the coefficients in the transfer amount equations. Although the theories discussed in section 2 do not predict differential effects by type of income, differences may arise because of differential degree of endogeneity of various income components. In addition, parents may be less responsive to shortfalls in their children's labor earnings because they also care about the leisure of their children, which may have increased. For any of these reasons, and others, the effects may differ across income sources.

The amount of unemployment compensation income reduces the amount of private transfers received (Table 2). The point estimate in the OLS specification is statistically significant at the .01 level and implies crowding out of 3.7 cents per dollar. For the tobit estimates, the coefficient estimate gives the effect of a one-dollar increase in unemployment compensation on the latent amount of transfers received. The estimates imply crowding out of the latent variable by 11 cents. The effect on the expected value of F of a one-dollar change in unemployment compensation is expressed as $\frac{dE(F)}{dG} = \Phi\left(\frac{\beta Z}{\sigma}\right)\beta_g$, where Z is the set of all regressors in (2a) and $\Phi(\cdot)$ is the cumulative normal distribution function. Evaluating at $\Phi(\cdot) = .291$ (29.1 percent of the weighted sample receive private transfers), an increase in unemployment compensation of one dollar decreases (the expected value of) private transfer receipts by 3.2 cents.[22]

In sum, the OLS and tobit results suggest that a one-dollar increase in unemployment benefits causes a 3 to 4 cent reduction in private interhousehold transfers. Given that the results are similar across OLS and tobit specifications, I proceed by addressing the endogeneity problem with linear estimators.

The instruments used in the 2SLS are state-specific policy parameters that influence the amount of UI income received: the maximum potential weekly benefit, the minimum potential weekly benefit, the maximum number of weeks benefits could be received, the earnings replacement ratio for a worker with average earnings,[23] the minimum wage credits required to receive the maximum potential benefit in the benefit year, and the minimum wage credits required to receive the minimum weekly benefit.[24]

These instruments provide power in explaining the variation in unemployment benefits. A joint test that restricts the coefficient estimates of these instrumental variables to be zero in the first stage OLS regression of unemployment benefits is rejected at the .01 level with an F-value equal to 2.80. Moreover, the second stage estimates of the effects of unemployment benefits on private transfers are statistically significantly different from zero at conventional levels.

As reported in Table 3, the estimate of crowding out increases to 40 cents when estimated by 2SLS. This estimate implies substantial crowding out. Given that 30 percent of the sample receives private transfers, the estimate implies that crowding out for families receiving private transfers is even greater. For these families, the OLS estimate implies crowding out of 13 cents (i.e. 4/30) per dollar while the 2SLS estimates imply roughly full crowding out.

Sensitivity Analysis

Many different samples and specifications were examined to determine the sensitivity of the estimate of crowding out. In general, the estimates are quite robust (Table 4). Eliminating the parental controls or the control for own income, or adding controls for change in earnings, permanent earnings, number of unemployment spells between 1984 and 1987, or cubics in income and age does not alter the estimate of crowding out in substantive ways. This consistency in results holds for the probit, tobit, OLS, and 2SLS estimates. Using the PSID family weights or restricting the analysis to

the SRC sample increases the estimates of crowding out when UI income is treated as exogenous, while the 2SLS estimates decline to -26 cents.[25]

It is hypothesized that the more intense the spell of unemployment the greater is the amount of private transfers and UI income. This would imply a positive bias on β_g if estimated with OLS. Realizing that the total number of weeks of unemployment experienced by the head and spouse in 1987 is also endogenous, it is included as a regressor to try to control for intensity of spell. The crowding out estimate does not change substantially. This evidence suggests that the bias due to unobserved intensity may not be serious. However, it may be that factors other than the duration of unemployment determine the intensity of unemployment.

Including the twenty households that received family transfers greater than $5,000 leads to somewhat higher estimates of crowding out, both in the OLS/tobit models and the 2SLS model. These twenty households are distinct from the rest of the sample in some ways, but similar in others. The head of one of the twenty households is a student, four received UI, all twenty are part of the SRC sample, all are white, and average household income is almost 50 percent greater than it is for others.

7. SUMMARY AND IMPLICATIONS FOR POLICY

Is there another leak in the bucket? Yes, the findings imply that unemployment compensation does displace private transfers. Estimates of the magnitude of crowding out, however, are sensitive to the treatment of endogeneity. The smaller estimates, which

ignore endogeneity, imply crowding out of about 3 to 4 cents, while estimates using two-stage least squares imply crowding out of 24-40 cents.

If private transfers received from friends and relatives are reduced because of public alternatives, some of the benefits of the public program "slide over" to others.[26] In the present case, benefits "slide" to those family members and friends who reduce the amount of private transfer support they provide to the unemployed. If these friends and family members were needy themselves, then perhaps society would be willing to make these indirect transfers to them. But the unemployed come from diverse socio-economic backgrounds, and their friends and families are not likely to be especially needy.

The displacement of family support should be included in cost-benefit calculations of the UI program, or any other transfer program. Although a complete cost-benefit analysis of the UI program is beyond the scope of this study, the estimates of displacement imply that ignoring crowding out of family support would lead to substantial underestimates of the ratio of costs to benefits.

Designing a palatable policy to avoid the displacement of family support by UI is difficult, if not impossible. One option is to make UI benefits dependent on the amount of private transfers - the greater the amount of private support the unemployed are receiving, the lower the amount of UI benefit they will be given. However, this policy would induce its own distortionary effects, including reducing the existing private support system for the unemployed. An alternative option is to link the amount of UI benefits to the variables that influence the receipt of family support, such as parental wealth or income, and whether one's parents are alive. However, this option is clearly not politically

feasible, and it has its own administrative costs, which may be substantial. In sum, the displacement of family support by UI imposes significant social costs, and no clear options exist to avoid these costs.

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[1] Services may consist of phone calls or letters to parents, assistance in the activities of daily life, or any other form of help.

[2] As Pollak (1988) notes, -S and $Y_c + F$ could be treated as a single vector of "goods" consumed by the child. Similarly, X_p, S, w, X_c, U_c could be represented by a single vector of goods consumed by the parent. These are separated for clarity in exposition.

[3] Roberts (1984) concludes that private transfers have been completely crowded out. On the other hand, Bernheim and Bagwell (1986, p. 308) conclude that the predictions are "not at all descriptive of the real world," and, therefore, the altruism model should be dismissed.

[4] Wilhelm (1996) has extended the altruism model, allowing altruistic parents to have a distaste for giving unequal transfers.

[5] Kotlikoff and Spivak (1981) suggest that transfers are the result of families acting as an annuities market. This, too, can be thought of as a type of exchange relationship between parents and children. Parents and children share the risk of the uncertain length of life of parents. Parents agree to transfer resources to the child at death and, in return, children agree to provide parents with assistance if the parents live longer than expected.

[6] There is, however, an income effect on private transfers associated with the lump sum transfer/tax experienced by the parent.

[7] Consider the case in which parents receive greater praise from society for giving to less wealthy children (e.g. $w = F / Y_c$). In this case, the marginal utility of giving transfers is larger the lower the child's income.

[8] Roberts (1984) addresses the timing of changes in some charitable donations. Also, Kingma (1989) uses a two-stage least squares procedure in his analysis of donations to public radio.

[9] The PSID consists of two samples: the Survey Research Center sample and the Survey of Economic Opportunity sample. The former is a random sample and the latter is an oversample of low-income

households whose head was under 60 years of age. Both samples are used in the analyses. In calculating the descriptive statistics, the PSID sample weights are used unless otherwise indicated.

[10] Throughout the paper the term "household" will refer to the nuclear family, which consists of the PSID respondent and his/her family living there. Thus, the respondent's parents, children, siblings, or any other relative not living in the respondent's household are not considered to be part of the respondent's "household." This unit of analysis is technically referred to as a PSID "family unit," as defined in the PSID User's Guide. For clarity in exposition, "household" is used instead of "family unit."

[11] Underscore included in questionnaire.

[12] Unfortunately the survey does not report loans and gifts separately. However, there is some evidence that loans are seldom repaid. Transfers of money to parents are very infrequent. Only 3 percent of the households report having received a transfer from an adult child. Furthermore, Martin and Martin (1978) find that transfers that are originally given as loans are seldom repaid and pressure to do so is minimal.

[13] The two data sets that contain the most complete information on private monetary transfers with a nationally representative sample are the 1988 PSID and the 1987-1988 National Study of Families and Household (NSFH). Unfortunately the NSFH did not collect data on public transfers received from each individual public program separately. Income from Social Security and Supplemental Security are lumped together. Aid to Families with Dependent Children, General Assistance, food stamps, and emergency assistance are all in one category, and Veterans Benefits, Unemployment Insurance, and Worker's Compensation are all lumped into another category. Another deficiency of the NSFH for this analysis is that it collected data on private transfers received over the preceding five year period as a whole, while public transfer income is reported for the past one year.

[14] Some needy people draw on external sources other than the government and family, most importantly private charities. However, the available evidence suggests that private charities provide a very small amount of assistance to needy persons relative to the government or family (Blank, 1997: page 202). For example, in the PSID, of all non-government monetary transfers received by PSID families, 90 percent was

received from family members. Therefore, restricting attention to familial transfers (which is required by data limitations) should not confound the estimates of crowding out.

[15] For members of the PSID sample who lived with their parents or parents-in-law, 5.3 percent received unemployment benefits during 1987. Of those who did not live with a parent or parent-in-law, 5.5 percent received unemployment benefits. Therefore, the data does not support the claim that those receiving unemployment compensation are more likely to live with their parents. Thus, this selection should not confound the results. For those households in which the head changed, 6.3 percent received unemployment benefits, while 5.2 percent of those households in which the head did not change received UI. Therefore, this selection should also not confound the results.

[16] An additional twenty households were dropped because they resided outside the US or they had missing values. The former were dropped because the appropriate unemployment insurance program parameters, which are used to identify the effects of unemployment compensation on private transfers, can not be determined. This leads to the sample of 893.

[17] See *Comparisons of State Unemployment Insurance Laws,* published by the U.S. Department of Labor, for more details on UI program policy parameters.

[18] However, it could be that the true value of monetary transfers is concentrated around amounts ending in 100, 500, or 1000.

[19] The largest sample size studied by Angrist (1991) is 800, and the sample size for the analyses which are central to the present study is never less than 893.

[20] Note that Nelson and Olsen (1978) proposed a consistent estimator of a similar, yet distinctly different model. In their model, the endogenous variable is the latent value (G^*), not the observed value of the limited variable (G). This is a different model and should not be confused with the model above.

[21] A parent-household is a household in which a parent or parent-in-law of the respondent lives. Thus, for a respondent whose own parents are both living and married, and whose in-laws are both living but divorced, the number of parent-households would be three.

[22] The unweighted percent of the sample that received family transfers is 24. Thus, the magnitude of the effect does not change substantially if the effect is evaluated at the unweighted percent receiving transfers.

[23] The replacement ratio was drawn from the House Ways and Means Committee's *Overview of Entitlement Programs, 1992*. The values are for 1989 because the 1987 values could not be ascertained.

[24] When private transfers are regressed on the state-specific UI parameters for the sample of families not experiencing unemployment, it is found that none of the parameters have statistically significant effects. This finding provides additional support for the validity of the instruments.

[25] As described in footnote 9, the PSID consists of two samples: the Survey Research Center sample (SRC) and the Survey of Economic Opportunity sample (SEO). The SRC randomly sampled the national population. The SEO over-sampled low-income households whose heads were less than 60 years old.

[26] See Lampman and Smeeding (1985) for more discussion of benefit slide.

Table 1. Magnitude of Unemployment Benefits and Private Transfers for Unemployed Families and Families Receiving Unemployment Benefits

	Unemployed (Column 1)	Receiving UI Benefits (Column 2)
Share of total sample	14.5%	6.0%
Mean income from UI	$686	$1,773
(Standard deviation)	($1,299)	($1,562)
Mean private transfer income	$243	$200
(Standard deviation)	($625)	($511)
Proportion receiving private transfers	29.1%	27.2%
Mean ratio of private transfers to UI income	---	46.6%
Mean ratio of income from UI to total household income	3.2%	8.1%
Mean ratio of private transfer income to total household income	2.3%	1.0%

Estimates based on weighted data using the 1988 PSID family weight. Households with non-positive total household income are excluded.

Table 2. Effects of Unemployment Insurance Income on the Amount and Probability of Private Monetary Tranfers Received (N=893)

	Probit		OLS		Tobit		
	Beta	t-stat	Beta	t-stat	Beta	Est. Effect~	t-stat
*Unemployment insurance income**	-0.007	1.49	-3.7	2.96	-11.0	-3.189	1.92
Adjusted total family income*	-0.001	2.80	-0.4	2.59	-1.5	-0.449	3.32
Years of school of head	0.082	3.23	31.5	3.34	136.2	39.648	4.16
# of parent-households:							
One	0.333	1.82	80.1	1.75	442.9	128.893	1.66
Two or more	0.456	2.29	138.8	2.20	658.5	191.615	2.30
Number of siblings, head+spouse	-0.021	1.55	-4.9	1.05	-27.1	-7.875	1.46
Head's age	-0.009	1.53	-0.9	0.44	-10.6	-3.071	1.31
Head female	0.154	0.96	68.2	1.14	259.1	75.405	1.22
Head white	0.338	2.75	130.0	2.77	489.5	142.430	3.05
Spouse present	-0.113	0.43	79.3	0.81	27.7	8.073	0.08
Child <3 years old in household	0.084	0.67	52.4	0.92	151.3	44.042	0.94
Head not married	-0.246	0.99	23.4	0.23	-158.9	-46.227	0.47
Head in poor/fair health	-0.065	0.44	69.1	1.09	104.4	30.368	0.54
Bought home in past year	0.588	2.40	329.7	1.90	824.0	239.783	2.67
Head's married parents' net wealth:							
These parents don't exist	0.025	0.12	-69.4	0.67	-65.2	-18.965	0.26
In debt	-0.292	1.02	-118.8	0.94	-387.9	-112.879	1.04
$0-24,999	-0.890	2.86	-243.7	3.49	-1214.6	-353.462	3.01
$25,000-99,999	-0.058	0.24	28.9	0.22	8.3	2.403	0.03
Head's father's education							
Not available/dk	-0.125	0.76	-37.6	0.79	-166.8	-48.543	0.77
12 years	0.025	0.19	-70.7	1.36	-102.1	-29.725	0.61
More than 12 years	0.310	1.92	99.4	1.38	331.8	96.544	1.63
Distance to head's parents:							
Less than 1 mile	0.288	1.10	10.6	0.10	206.7	60.156	0.61
1-100 miles	0.128	0.59	-0.4	0.00	134.9	39.254	0.50
State unemployment rate	-0.046	1.75	-13.3	1.68	-58.7	-17.075	1.70
Constant	-1.098	1.91	-115.2	0.51	-2102.5	-611.820	2.62

*Coefficient estimates on unemployment insurance income and total family income are multipled by 100. Total family income includes income from all sources except private transfers and all government transfers.

~The effect of the explanatory variables in the tobit analysis ("Est. Effect") are evaluated at F(.)=0.291, which is the weighted proportion receiving private transfers.

Omitted categories: Number of living parent-households: none; head's married parents' net worth: >$99,999; head's father's education: <12 years; distance to head's parents: >100 miles.

The t-statistics are based on White standard errors.

Table 3. Effects of Unemployment Insurance Income on Private Monetary Tranfers Received, Two-Stage Least Squares (N=893)

	Coefficient Estimate	t-statistic
*Unemployment insurance income**	-40.1	2.10
Adjusted total family income*	-0.5	2.76
Years of school of head	40.3	3.40
# of parent-households: One	132.7	1.72
Two or more	143.5	1.66
Number of siblings, head+spouse	-6.0	1.00
Head's age	1.1	0.42
Head female	42.3	0.58
Head white	173.6	2.67
Spouse present	8.8	0.07
Child <3 years old in household	57.3	0.82
Head not married	-197.7	1.23
Head in poor/fair health	18.5	0.24
Bought home in past year	312.0	1.87
Head's married parents' net wealth:		0.00
These parents don't exist	-73.2	0.61
In debt	-275.9	1.71
$0-24,999	-336.7	3.06
$25,000-99,999	-61.2	0.45
Head's father's education		0.00
Not available/dk	-11.2	0.16
12 years	13.5	0.16
More than 12 years	137.9	1.54
Disatnce to head's parents:		0.00
Less than 1 mile	58.1	0.43
1-100 miles	64.6	0.54
State unemployment rate	-11.8	1.02
Constant	31.1	0.11

*Coefficient estimates on unemployment insurance income and total family income are multipled by 100. Total family income includes income from all sources except private transfers and all government transfers.

Omitted categories: Number of living parent-households: none; head's married parents' net worth: >$99,999; head's father's education: <12 years; distance to head's parents: >100 miles.

The t-statistics are based on White standard errors.

Table 4. Effects of Unemployment Insurance Income on the Amount and Probability of Private Monetary Tranfers Received. Various Samples and Specifications.

	Probit		OLS		Tobit			2SLS	
	Beta	t-stat	Beta	t-stat	Beta	Est. Effect~	t-stat	Beta	t-stat
As reported in Tables 2 & 3	-0.007	1.49	-3.7	2.96	-11.0	-3.2	1.92	-40.1	2.10
Eliminate parental controls	-0.007	1.41	-3.7	3.00	-11.1	-3.2	1.93	-41.9	2.22
Eliminate own income control	-0.006	1.31	-3.5	2.75	-10.1	-2.9	1.75	-44.9	2.20
Control for weeks of unemployment	-0.006	1.27	-3.4	2.68	-9.5	-2.8	1.65	-42.2	1.95
Control for change in earnings, 1987-1986	-0.007	1.47	-4.0	3.13	-12.0	-3.5	2.06	-43.5	2.05
Control for average earnings, 1984-87	-0.008	1.72	-4.3	3.27	-13.4	-3.9	2.28	-46.8	2.13
Control for # of spells of unemployment of head, 1984-87	-0.005	0.95	-3.3	2.24	-8.4	-2.4	1.36	-43.8	1.76
Cubic in income and age	-0.007	1.42	-3.6	2.84	-10.4	-3.0	1.83	-42.1	2.01
Use PSID family weights	-0.010	8.02	-4.4	2.89	-15.3	-4.4	2.82	-26.0	2.11
Restrict to the SRC sample (N=318)	-0.014	2.16	-4.6	2.38	-19.3	-5.7	2.14	-25.7	2.05
Don't eliminate self-employed (N=1013)	-0.010	2.03	-4.4	3.71	-14.3	-4.2	2.60	-45.6	2.38
Don't eliminate if head changed (N=1017)	-0.007	1.49	-3.8	3.20	-10.8	-3.3	2.00	-52.5	2.35
Don't eliminate if parents in household (N=949)	-0.007	1.58	-3.7	2.95	-11.2	-3.4	2.00	-42.6	2.15
Don't eliminate if transfers>$5,000 (N=913)	-0.008	1.70	-10.1	2.04	-33.2	-10.7	1.94	-50.1	0.99

Coefficient estimates multiplied by 100. t-statistics based on White standard errors. ~Effects in the tobit analysis are evaluated at the weighted proportion receiving transfers in the respective sample.

Table A1. Descriptive Statistics of Key Variables (N=893).

	Mean	Standard Deviation
Unemployment insurance income	682	1297
Adjusted total family income*	22422	20992
Years of school of head	11.833	2.510
# of parent-households:		
One	0.314	0.464
Two or more	0.529	0.499
Number of siblings, head+spouse	5.708	3.780
Head's age	38.375	12.888
Head female	0.254	0.436
Head white	0.753	0.431
Spouse present	0.592	0.492
Child <3 years old in household	0.184	0.388
Head not married	0.405	0.491
Head in poor/fair health	0.134	0.341
Bought home in past year	0.040	0.196
Head's married parents' net wealth:		
These parents don't exist	0.657	0.475
In debt	0.032	0.175
$0-24,999	0.047	0.211
$25,000-99,999	0.050	0.218
Head's father's education		
Not available/dk	0.078	0.268
12 years	0.235	0.424
More than 12 years	0.150	0.358
Ditatnce to head's parents:		
Less than 1 mile	0.056	0.230
1-100 miles	0.163	0.370
State unemployment rate	6.410	1.705
Maximum weekly benefit	199	48
Minimum weekly benefit	34	12
Maximum weeks	26.082	0.568
Replacement ratio, average wage earner	0.386	0.088
Min wage credit for max benefit	12848	4266
Min wage credit for min benefit	1408	560

Total family income includes income from all sources except private transfers and all government transfers.
The PSID famly weights are used in calculating the means and standard deviations.